

**WHAT IS CLAIMED IS:**

- 1           1.       A frame structure comprising:  
2           super-channel information.
  
- 1           2.       The frame structure of claim 1, wherein  
2           said super-channel information comprises a super-channel identifier and said  
3           super-channel identifier identifies a super-channel.
  
- 1           3.       The frame structure of claim 2, further comprising:  
2           sub-channel information.
  
- 1           4.       The frame structure of claim 3, wherein said sub-channel information  
2 comprises:  
3           a sub-channel identifier, wherein said sub-channel identifier identifies a sub-  
4           channel.
  
- 1           5.       The frame structure of claim 4, wherein said super-channel information  
2 further comprises:  
3           a sub-channel bitmap, wherein each bit in said sub-channel bitmap represents  
4           an operational state of a corresponding sub-channel.
  
- 1           6.       The frame structure of claim 5, wherein said sub-channel bitmap  
2 comprises:  
3           a bit corresponding to an operational state of said sub-channel.
  
- 1           7.       The frame structure of claim 5, wherein said super-channel information  
2 further comprises:  
3           error condition flags, wherein said error condition flags include a  
4           forced/manual switch flag.
  
- 1           8.       The frame structure of claim 7, wherein said error condition flags  
2 further include a bit-error-rate flag, a loss-of-signal flag and a loss-of-frame flag.

1 9. The frame structure of claim 4, further comprising:  
 2 alternate super-channel information, wherein said super-channel information  
 3 comprises an alternate super-channel identifier and said alternate  
 4 super-channel identifier identifies an alternate super-channel.

1 10. The frame structure of claim 9, wherein  
 2 said super-channel information further comprises primary enable information,  
 3 and  
 4 said alternate super-channel information further comprises alternate enable  
 5 information.

1 11. The frame structure of claim 10, wherein  
 2 primary enable information is configured to indicate if said super-channel is  
 3 operational, and  
 4 alternate enable information is configured to indicate if said alternate super-  
 5 channel is operational.

1 12. The frame structure of claim 10, wherein  
 2 primary enable information comprises primary LSP enable flags, and  
 3 alternate enable information comprises alternate LSP enable flags.

1 13. The frame structure of claim 12, wherein  
 2 said primary LSP enable flags and said alternate LSP enable flags are  
 3 configured to indicate which of said super-channel and said alternate  
 4 super-channel should carry an LSP.

1 14. The frame structure of claim 13, wherein  
 2 said primary LSP enable flags are configured to indicate if an LSP should be  
 3 carried by said super-channel, and  
 4 said alternate LSP enable flags are configured to indicate if said LSP should be  
 5 carried by said alternate super-channel.

1           15.     The frame structure of claim 10, wherein said super-channel  
2 information comprises:  
3           a sub-channel bitmap, wherein each bit in said sub-channel bitmap represents  
4           an operational state of a corresponding sub-channel.

1           16.     The frame structure of claim 15, wherein said sub-channel bitmap  
2 comprises:  
3           a bit corresponding to an operational state of said sub-channel.

1           17.     The frame structure of claim 15, wherein said super-channel  
2 information further comprises:  
3           error condition flags, wherein said error condition flags include a  
4           forced/manual switch flag.

1           18.     The frame structure of claim 4, further comprising:  
2 sub-channel state information, wherein said sub-channel state information  
3           conveys a state of said sub-channel.

1           19.     The frame structure of claim 18, wherein said sub-channel state  
2 information conveys a state of a connection between a far-end transmitter and a near-  
3 end receiver over said sub-channel